

## REMARKS

The foregoing amendments do not involve new matter.

In the outstanding Office Action claims 1, 8, 11, 13, 15, and 20-23 were rejected under 35 U.S.C. § 112, second paragraph. The above amendment of claims 1, 15, 22 and 23 follows the Examiner's suggestion and overcomes the rejection of those claims. Claims 11 and 13 have been amended to reflect the Examiner's interpretation of the claims as stated in the Office Action.

The rejection of claims 8, 20 and 21 is traversed. Each of these rejections was predicated on a belief that *l*-menthol is a physiological cooling agent for purposes of the claims. However, as stated in paragraph 0045 of the application, "the term 'physiological cooling agent' does not include traditional flavor-derivatives such as *l*-menthol or menthone." In light of this definition, claims 8, 20 and 21 are definite as written.

In the outstanding Office Action claims 1, 2, 7, 11-16, 18, 19, 23-25, 28-33 and 37 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0141927 (Johnson). This rejection is respectfully traversed in view of the accompanying declaration from the three listed inventors in Johnson. The declaration makes it clear that the portions of Johnson relied upon in making this rejection were not the invention of another. Rather, the items in Johnson that are cited as anticipating the above rejected claims is the work of two of the applicants of the present application. Thus the reference describes applicants own work, and is therefore not prior art under 35 U.S.C. § 102(e).

In the outstanding Office Action claims 1-37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over PCT Published Application No. WO99/13734 (Wolf) in view of U.S. Patent No. 6,328,982 (Shiroyama) and PCT Published Application No. WO03/043431 (Pelan), in view of "GRAS Flavoring Substances 20" (Food Technology. 2001. GRAS Flavoring Substances, Vol. 55, pp 34-48) (hereinafter GRAS Flavoring Substances 20) and "GRAS Flavoring Substances 21" (Food Technology. 2003. GRAS Flavoring Substances, Vol. 57, pp 46-59) (hereinafter GRAS Flavoring Substances 21). This rejection is respectfully traversed. Claim 1 calls for methyl glutarate and one or

more other physiological cooling agents selected from the group consisting of *l*-isopulegol and p-menthane-3,8-diol. The Office Action cites a number of references which disclose the individual use of the physiological cooling agents specified in claim 1. However, no one reference contains all of the required cooling agents, specifically menthol glutarate and at least one of isopulegol and p-menthane-3,8-diol. The Office Action argues that combining the recited physiological cooling agents specified in claim 1 would have been obvious, asserting that it is *prima facie* obvious to combine two cooling agents. However, one problem solved by the present invention is not merely to produce a cooling composition, but rather to produce a cooling composition which simulates the cooling effects of WS-23. This was an unexpected result. WS-23 is an expensive but very high quality physiological cooling agent. Also, there are some countries where WS-23 is not yet approved for use in food items. Therefore, producing a cooling composition that has the same properties as WS-23, that is less expensive, and that uses compounds that are food approved, is a highly beneficial result.

Paragraph 0089 of the application states: "In the present invention, it was surprisingly discovered that a blend of menthol glutarate with *l*-isopulegol formed a cooling composition with properties similar to WS 23, a high quality stand alone cooling agent when used in chewing gum. A blend of menthol glutarate and p-menthane 3,8-diol (hereinafter called 'menthanediol') may provide the same benefit. It was also surprisingly discovered that the three way mixture of *l*-isopulegol, menthol glutarate and menthanediol gave high quality cooling similar to WS 23 in hard candy."

While it may be obvious that a blend of two or more physiological cooling agents is likely to produce a cooling composition, it is anything but obvious that the specific combinations taught by the inventors of this application would be effective to produce a composition with properties similar to WS-23. The experimental data presented in the application proves this surprising result. Table 1 of the application gives the cooling intensity and bitterness of various physiological cooling agents. As stated in paragraph 00144: "Based on the data in Table 1 above, it would take about five times more menthol glutarate and about half as much *l*-isopulegol to equal the cooling effect of WS-23. However, as shown in the examples below, about the same level of menthol glutarate as WS-23, along with a very low level of isopulegol and/or menthanediol, gives

a similar level of coolness compared to WS-23 in hard candy and chewing gum.” The testing of the Examples is reported in paragraphs 00145 and 00159 of the present application. Paragraph 00151 states: “Sensory tests of the products, A vs. 1, B vs. 2, and C vs. 3, showed the samples to have similar cooling and flavor attributes, which was confirmed in consumer tests that demonstrated parity.” Paragraph 00159 states: “Bench level evaluation of these inventive examples indicated the cooling level, cooling quality, and cooling duration were similar to WS-23 for the blend of menthyl glutarate and *I*-isopulegol compared to WS-23.”

Thus, even if a *prima facie* case of obviousness were made out by the references, the surprising result achieved by the claimed invention rebuts a finding of obviousness. The invention is especially non-obvious when considering that the cited references describe many additional cooling agents which are not one of the specified physiological cooling agents in claim 1. Together these references include far too many cooling agents to reasonably expect that a technician of ordinary skill would exhaustively try every possible combination in seeking a replacement for WS-23. In the absence of a specific teaching to combine menthyl glutarate with either of isopulegol or p-menthane-3,8-diol it cannot be considered obvious to arrive at this specific combination. Claim 1 is thus non-obvious over the cited references.

Claims 15, 22, 23, like claim 1, call for menthyl glutarate and one or more other physiological cooling agents selected from the group consisting of *I*-isopulegol and p-menthane-3,8-diol. Claims 28, 31, 34 and 36 call specifically for the combination of menthyl glutarate and *I*-isopulegol. Thus these claims, like claim 1, are directed to an invention with surprising results. Further, the rest of the claims are dependent on one of the forgoing independent claims. They are thus patentable for at least the same reasons as the independent claims. In addition, the dependent claims include additional limitations that are not obvious from the cited references. For example, claim 8 specifies that the physiological cooling agents in the confection consist of menthyl glutarate, *I*-isopulegol and p-menthane-3,8-diol. None of the references suggest this specific combination of three physiological cooling agents. Claims 17, 24, 25, 26 and 27 specify ratios of the recited physiological cooling agents that were found to be

particularly effective. These further limitations are not obvious from the cited references, especially in view of the surprising results described in the application.

It is believed that the case is in condition for allowance. An early notice to that effect is respectfully requested.

Respectfully submitted,

  
\_\_\_\_\_  
Steven P. Shurtz  
Registration No. 31,424  
Attorney for Applicants

Date: December 6, 2010  
BRINKS HOFER GILSON & LIONE  
P.O. Box 10395  
Chicago, IL 60610  
(312) 321-4200  
Direct Dial: (801) 333-7906